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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/529,255	04/11/2000	TAKANORI SHINOKI	2000-0465A	5270

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EXAMINER

BOYD, JENNIFER A

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/529,255

Applicant(s)

SHINOKI ET AL.

Examiner

Jennifer A. Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-20 is/are pending in the application.
- 4a) Of the above claim(s) 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-11, 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 17, 2005 has been entered. The Applicant's Amendments and Accompanying Remarks, filed October 17, 2005, have been entered and have been carefully considered. Claims 9 and 18 are amended, claims 19 – 20 are added and claims 9 – 11 and 17 – 20 are pending. In view of Applicant's amendments, the Examiner has revised the previously applied rejection over Goettmann below. The invention as currently claimed is not found to be patentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 9 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not

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described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 10 – 11, 17 and 19 – 20 are rejected as being dependent on rejected claims 9 and 18.

5. The phrase “except for conjugate fiber” is new matter, because this negative limitation is not literally supported by the specification. *Ex Parte Grasselli*, 231 USPQ 393. Contrary to the applicant’s statement in the present response, this limitation is not supported by the specification.

Claim Rejections - 35 USC § 103

6. Claims 9 – 11 and 17 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goettmann (US 5,851,355).

Goettmann is directed to a reverse osmosis support substrate and method for its manufacture (Title).

Goettmann teaches support substrate comprising 40 – 84% by weight of polymeric staple fibers having a denier between 0.2 and 3.0 and 16 – 60 % by weight of polymeric binder fibers, where a first and second fraction of the binder material has a melting temperature less than the polymeric staple fibers and less than the first fraction respectively (see claim 5). Goettmann teaches that the binder fibers can comprise co-polyester (see claim 7). It should be noted that, although Goettmann does teach using conjugate fibers for the binder fibers, Goettmann also teaches single component fibers as the binder fibers, which meets Applicant’s requirement of “except for conjugate fiber”. Goettmann teaches that the sheet porosity is in the range between 5 – 10 cfm (column 3, lines 1 – 10). According to www.frazierinstrument.com, the air permeability value of 5 – 10 cfm can be converted to Applicant’s units of cc/cm²s by multiplying cfm by

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0.508. Therefore, 5 – 10 cfm is equivalent to 2.54 – 5.08 cc/cm²s. The nonwoven is made by a wet-laying process and then thermally bonded under controlled temperature and pressure conditions (column 4, lines 20 – 34). Goettmann teaches that a thin film of polysulfone is attached to the nonwoven support substrate (column 6, lines 45 – 55) as required by claims 17 and 18.

As to claim 11, it should be noted that the most common type of polyester is polyethylene terephthalate, so it is the position of the Office that the polyester of Goettmann would be polyethylene terephthalate. According to Applicant's Specification on pages 13 – 14, polyethylene terephthalate meets the chemical limitations of claim 11.

As to claims 19 – 20, Goettmann teaches that the substrate can be thermally calendared with rolls heated in the range from 385 – 435 degrees F (196 - 224 degrees C) (column 5, lines 30 – 36).

Goettmann discloses the claimed invention except for that the pore size is 42 micrometers or less as required by claims 9 and 18. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a support member having a maximum pore size of 42 micrometers or less since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the pore size to create a support member with optimal permeability.

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Although Goettmann does not explicitly teach the claimed double refraction of 0.170 or more, a heat shrinkage stress at 200 degrees Celsius of 0.10-0.60 g/d and a mean value of breaking length at an elongation of 5% in a lengthwise direction (MD) and a crosswise direction (CD) of 4.0km or more, it is reasonable to presume that double refraction of 0.170 or more, a heat shrinkage stress at 200 degrees Celsius of 0.10-0.60 g/d and a mean value of breaking length at an elongation of 5% in a lengthwise direction (MD) and a crosswise direction (CD) of 4.0km or more is inherent. Support for said presumption is found in the use of like materials (i.e. substrate 5 – 40% by weight of 0.2 – 3.0 denier first polyester staple fiber, 0 – 60% of a second polyester staple fiber having a denier greater than first polyester staple fiber but still in the range from 0.2 – 3.0, 15 – 50% by weight of a first binder fiber and 1 – 10 % by weight of a second binder fiber having an air permeability between 2.54 – 5.08 cc/cm²s) which would result in the claimed properties. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed properties of double refraction of 0.170 or more, a heat shrinkage stress at 200 degrees Celsius of 0.10-0.60 g/d and a mean value of breaking length at an elongation of 5% in a lengthwise direction (MD) and a crosswise direction (CD) of 4.0km or more would obviously have been present once the Goettmann product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or an obvious variant from a product of the prior art, the claim is unpatentable even though

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the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the Applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983).

Response to Arguments

7. Applicant's arguments filed October 17, 2005 have been fully considered but they are not persuasive.

Applicant argues that the Goetmann reference must have misunderstood that polyester short cut EP 043 is 0.43 denier and that Kuraray does not supply 0.43 denier fibers in the market. Applicant indicated that a brochure was attached to provide evidence that Kuraray does not supply 0.43 denier fibers. However, the brochure was not included with the present response. Furthermore, even if 0.43 denier fibers by Kuraray are not publicly available in the market now, it is not proof that they did not exist at one point in time. Also, it is presumed that every patent is valid.

Applicant argues that the double refraction of EP 043 was measured to be 0.147 rather than Applicant's require double refraction of 0.170 or more. The arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). The Applicant is required to provide the details of the experiment and results in Declaration form. It should be noted that Goetmann teaches the use of other polyester fibers besides EP 043 and it is submitted that those fibers would inherently possess Applicant's double refraction of 0.170 or more. It is suggested that the Applicant provide further physical and chemical details of the polyester fiber in order to differentiate it from the prior art product.

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Applicant argues that the breaking length of EP 043 and EP 101 are shown on page 8 or the brochure thus providing evidence that Goetmann does not disclose or suggest a non-woven fabric made from fibers having the claimed breaking length. As discussed above, the brochure was not included with the present response. Furthermore, the arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965). The Applicant is required to either provide the brochure or provide the details of the experiment and results in Declaration form.

Applicant argues that Goetmann discloses a bicomponent type binder fiber while Applicant requires a single component binder fiber. It should be noted as discussed above that Applicant does not have support for the limitation of "except for conjugate fiber". Furthermore, Goetmann discloses the use of other binder fibers that are not bicomponent fibers. See rejection above.

Applicant argues that Goetmann describes a fabric which is thermally calendared with rolls heated to temperatures of 425 degrees F. Applicant submits that the thermal calendar process as described by Goetmann at a temperature higher than the binder resin cannot actually be carried out to produce a support member, because the binder resin will melt and adhere to the roll. It should be noted that the Examiner cannot comment on the validity of the patent. Although the calendaring temperature as discussed by Goetmann is higher than the melting point of EP-101 fibers and N-720H fibers, Goetmann also teaches the use of other binder fibers whose melt temperatures not are disclosed. Applicant indicates that the thermal calendaring process of the Applicant is carried out at a temperature lower than the melting point of the binder resin. It is suggested that the Applicant claim the melting temperature of the binder fibers and also claim

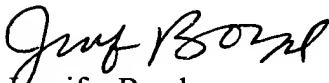
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that the thermal calendaring process occurs at a temperature lower than the melting point of the binder resin.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer Boyd
December 16, 2005


Ula G. Ruddock
Primary Examiner
Tech Center 1700